Hybanthus, Ipomoea, Cordia, Russelia, Tetramerium, Isertia, Liabum (2). IV. "Diagnoses of new spermatophytes from Mexico," by M. L. FERNALD, new species being described under Carex, Alnus (2), Heliotropium, Salvia (9), Castilleja, Ruellia.—J. M. C.

Bicentennary of Linné.—In connection with the Linnean celebration at the University of Upsala, a series of eight publications has been issued. In general the volumes contain reprints of some of the most interesting minor papers of Linné, which thus become accessible to a far greater number of readers. For example, the "Invitation du recteur pour assister aux fêtes" is a paper of 107 pages, consisting chiefly of a reprint of Linné's "Cultur der Pflanzen." The announcements in reference to the conferring of doctor's degrees in philosophy, medicine, law, and theology are four volumes of reprints. There is also a special publication, "Linné och Vaxtodlingen," edited by Swederus. The first (pp. 341) of four volumes containing the correspondence of Linné is also included. The most elaborate member of the series is the "Linnéporträtt," prefaced by a colored portrait of Linné, and containing reproductions of numerous other portraits, busts, medals, etc., as well as a description of the 515 portraits (paintings, medals, etc.) in the collection of the University. The University of Upsala has certainly spared no labor and expense in doing honor to her illustrious professor.—J. M. C.

Genera Siphonogamarum.—The tenth fascicle of DALLA TORRE and HARMS's[6] list of the genera of seed-plants continues the general alphabetical list of names, the last entry being Macrocarpium.—J. M. C.

NOTES FOR STUDENTS

Fungi in termite nests.—PETCH gives an account of the fungi found in certain termite nests in Ceylon, which grow from the combs found in the chambers. The fungus flora of the combs in their normal state seems to be limited to few species which occur almost pure. The only form on the normal comb is a hyphomycete which was not determined, but from the descriptions seems to be like Sterigmatocystis. This fungus seems to be endemic in the nests, according to the author not being found outside them.

When the combs grow old they give rise to two forms of agarics, which, however, the author regards as one species. Both have been described under several names from material sent to Europe. These agarics arise from combs at a considerable depth below the surface, so that their rootlike stalks attain an average length of 30^{cm}. The lower part of the stalk is black, while the upper portion is white. The first form is marked by the absence of an annulus and by the peculiar fact that only a single plant develops from each comb. Although a large number start, only one pushes its way to the surface of the ground. All the other rudiments fail entirely to develop, so that it is not possible to find specimens which have

[6] DALLA TORRE, C. G. DE, and HARMS, H., Genera Siphonogamarum ad systema Englerianum conscripta. Fasc. 10. pp. 721–800. Leipzig: Wilhelm Engelmann. 1907. *M* 6.

pushed part way through the earth. The second form differs from the first in the possession of an annulus and also in its habit. Several plants of this may arise from the one comb, while at the same time many immature specimens capable of further growth may be present in the comb. The author regards the presence or absence of the annulus as an accidental character due to the conditions of growth; and, since the forms are identical in every other respect, he considers them to belong to a single species which he calls *Volvaria eurhiza*, reducing the other names to synonyms. Whatever may be said of the identity of the two forms, this disposition is entirely erroneous, for Volvaria has a free valve at the base of the stem, but possesses no annulus. These forms, judging from the descriptions and figures, have no free valve; but one has an annulus while the other has not. They will probably find a place in Pluteus or Annularia.

Beside the fungi described, a third form seems to be quite universally present in the fresh termite comb, although this form, which is determined as *Xylaria nigripes*, does not appear in the nests. If, however, the combs are removed and kept under bell-jars, the Xylarias always appear, forming first a conidial stroma, which is followed by the development of perithecia. The author believes that the Xylarias do not appear in the nests merely because they are eaten off by the termites as soon as they appear. Other forms of fungi growing on the combs when placed in a moist chamber are probably accidental saprophytes.

All of the forms described are eaten by the termites. When an inhabited comb is inclosed under a bell-jar the termites eat off the heads of the hyphomycete and also the Xylaria as it develops. They also eat the stalks of the agarics, following them to the surface of the ground. It is probable, therefore, that the fungi of the termite nests form food for the inhabitants, as do the "fungus gardens" for the leaf-cutting ants. It is difficult to prove this definitely by experiment, for in the absence of other foods the termites will eat many substances which do not ordinarily form part of their ration.—H. HASSELBRING.

Sperms of Cycas.—SHIBATA and MIYAKE[7] have been experimenting with sperms of Cycas. Material was sent from southern Japan to Tokyo late in September and early in October, at which time the pollen tubes are discharging their sperms. Experiments with various solutions showed that the sperms either lack chemotactic irritability, or chemotaxis can take place only under some unknown external conditions. If chemotactic irritability has been lost, fertilization must be accomplished by mechanical means. It is interesting to note that the contents of the archegonium, while they seem to exert no influence upon Cycas sperms, nevertheless attract those of some pteridophytes.—CHARLES J. CHAMBERLAIN.

CORRENS[8] has tested the influence of external factors on the sex-condition

[7] SHIBATA, K., and MIYAKE, K., Some observations on the physiology of Cycas spermatozoids. Botanical Magazine **21**:45–48. 1907.

[8] CORRENS, C., Zur Kenntnis der Geschlechtsformen polygamer Blütenpflanzen und ihrer Beeinflussbarkeit. Jahrb. Wiss. Bot. **44**:124–173. *figs. 4.* 1907.